

KHIL'CHEVSKIY, V.V., kand.tekhn.nauk; SHUL'GINOV, V.S., aspirant

Determination of the elastic modulus and damping capacity. Izv.vys.  
ucheb.zav.; mashinostr.no.1:40-43 '63.

(MIRA 16:5)

1. Kiyevskiy politekhnicheskii institut.  
(Plastics--Testing)

STARUKHIN, N.M., nauchnyy sotrudnik; SHUL'GINOVA, M.N., nauchnyy sotrudnik;  
SOLOV'YEVA, T.P., nauchnyy sotrudnik; SUGROBOV, N.P., nauchnyy  
sotrudnik; pri uchastii rabotnikov Lozhnikova, N.N., Lagoda, S.G.  
i Shishmilo, N.N.; SKVORTSOVA, I.P., red.izd-va; GUSEVA, S.S.,  
tekhn.red.; BOROVNEV, N.K., tekhn.red.

[Construction of a multistory frame-panel apartment house in Moscow]  
Opyt stroitel'stva karkasno-panel'nogo mnogoetazhnogo zhilogo doma  
v Moskve. Moskva, Gos.izd-vo lit-ry po stroit.arkhit. i stroit.  
materialam, 1958. 67 p. (MIRA 11:6)

1. Akademiya stroitel'stva i arkhitektury. Institut organizatsii  
i mekhanizatsii stroitel'stva. 2. Sektor organizatsii zhilishchnogo  
i grazhdanskogo stroitel'stva Nauchno-issledovatel'skogo instituta  
organizatsii i mekhanizatsii stroitel'stva (for Starukhin, Shul'ginova,  
Solov'yeva, Sugrobov). 3. Stroitel'no-montazhnoye upravleniye No.6  
tresta Moszhilstroy Glavmosstroya (for Lozhnikov, Lagod, Shishmilo)  
(Moscow--Apartment houses)

STARUKHIN, N.M., nauchnyy sotrudnik; SHUL'GINOVA, M.N., nauchnyy sotrudnik;  
SOLOV'YEVA, T.P., nauchnyy sotrudnik. Primala uchastiye YEVSINA,  
A.I., starshiy tekhnik. SKVORTSOVA, I.P., red.izd-va: TEMKINA,  
Ye.L., tekhn.red.

[Construction of an experimental residential block in Moscow]  
Opyt stroitel'stva eksperimental'nogo zhilogo kvartala v Moskve.  
Moskva, Gos.izd-vo lit-ry po stroit., arkhitekt. i stroit.materialam.  
1959. 110 p. (MIRA 13:2)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
2. Sektor organizatsii zhilishchnogo stroitel'stva i tekhnologii proizvodstva rabot Nauchno-issledovatel'skogo instituta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu (NIIOMTP) (for all except Skvortsova, Temkina).  
(Moscow--Apartment houses)

*SHUL'GO, Ye. I.*

~~SHUL'GO, Ye. I.~~ inzhener.

Selecting the most favorable shape of connecting quadrilateral  
for the location of underground workings. Trudy VNIMI no.25:12-46  
'52. (MIRA 8:3)

(Mine surveying) (Triangulation)

AVERSHIN, S.G., prof., doktor tekhn. nauk, red.; BLOKHA, Ye. Ye., gornyy inzh., red.;  
BUTKEVICH, T.V., gornyy inzh., red.; KRIKUNOV, L.A., gornyy inzh., red.;  
LISHUTIN, B.G., gornyy inzh., red.; OGLOBLIN, D.N., prof., doktor  
tekhn. nauk, red.; OMEL'CHENKO, A.N., kand. tekhn. nauk, red.;  
RYZHOV, P.A., prof., doktor tekhn. nauk.; GLAZENAP, K.K., inzh., red.;  
KONSTANTINOVA, L.F., inzh., red.; NIKITINA, M.M., inzh., red.;  
NOVOSELOVA, Yu. A., inzh., red.; SHUL'GO, Ye. I., inzh., red.; YAKOVLEV,  
M.G., inzh., red.; RASHKOVSKIY, Ya. Z., inzh., red.; STEL'MAKH, A.N.,  
red. 1zd-va.; BERLOV, A.P., tekhn. red.; NADELINSKAYA, A.A., tekhn. red.

[Transactions of the All-Union Scientific and Technical Conference  
on Mine Surveying July 17-23, 1956] Trudy vsesoiuznogo nauchno-  
tekhnicheskogo soveshchaniya po markshaiderskomu delu 17-23 iulia  
1956 g. Moskva, Ugletekhnizdat, 1958. 743 p. (MIRA 11:12)

1. Vsesoyuznoye nauchno-tekhnicheskoye soveshchaniye po  
markshaiderskomu delu. 1956.

(Mine surveying)

FILATOV, S.A., kand.tekhn.nauk; SHUL'GO, Ye.I., inzh.

Analysis of accuracy in the underground running of trigonometric  
leveling. [Trudy] VNIMI no. 33:32-53 '58. (MIRA 14:5)  
(Mine surveying)

FILATOV, S.A., kand.tekhn.nauk, otv.red.; RASHKOVSKIY, Ya.Z., starshiy inzh., red.; NIKIFOROV, B.I., prof., doktor tekhn.nauk; SHUL'GO, Ye.I., inzh., starshiy nauchnyy sotrudnik. Prinimali uchastiye: MIL'NER, Ye.S., inzh., red.; ZEBODE, I.V., inzh., red. SLAVOROSOV, A.Kh., red.izd-va; LOMILINA, L.N., tekhn.red.

[Technical instructions on mine surveying] Tekhnicheskaya instruktsiya po proizvodstvu marksheiderskikh rabot. Leningrad, Ugletekhizdat, 1959. 371 p. (MIRA 13:12)

1. Nachal'nik otdela metodiki marksheyderskikh rabot Vsesoyuznogo nauchno-issledovatel'skogo marksheyderskogo instituta (for Filatov).
2. Tekhnicheskoye upravleniye Gosgortekhnadzora SSSR (for Rashkovskiy).
3. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut (for Shul'go).
4. Glavnyy marksheyder ugol'nogo kar'yera No.1 tresta Korkinugol' (for Mil'ner).
5. Nachal'nik tekhnicheskogo otdela Soyuz-markshtresta (for Zebode).

(Mine surveying)

DANILEVICH, M.V., red.; SHUL'GOVSKIY, A.F., red.

[Problems of present-day Latin America] Problemy sovremennoi  
Latinskoi Ameriki. Moskva, 1959. 429 p. (MIRA 13:8)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh  
otnosheniy.  
(Latin America--Economic conditions)



GRECHEV, M.A., kand. ekon. nauk; KLESNET, O.G., kand.ekon. nauk;  
TARASOV, K.S., kand. ekon. nauk; DANILEVICH, M.V.,  
doktor ekon. nauk; YURLOV, A.F., kand.ekon. nauk;  
ONUFRIYEV, Yu.G.; ROMANOVA, Z.I., kand. ekon. nauk;  
SHERMET'YEV, I.K., kand. ekon. nauk; SHUL'GOVSKIY,  
A.F., kand. istor. nauk; KALININ, A.I., kand. iurid. nauk;  
AVARINA, V.Ya., doktor ekon. nauk, red.; BAYKOV, V.S., red.;  
KOVALEV, A.P., red.izd-va; KASHINA, P.S., tekhn. red.

[Economic problems of Latin American countries] Ekonomi-  
cheskie problemy stran Latinskoi Ameriki. Moskva, Izd-vo  
AN SSSR, 1963. 511 p. (MIRA 17:1)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezh-  
dunarodnykh otnosheniy.

SHUL'GOVSKIY, F., general-leytenant inzhenerno-tekhnicheskoy sluzhby  
v otstavke

IAkov Smushkevich. Av.i kosm. 45 no.7:87 '62. (MIRA 15:8)  
(Smushkevich, IAKov Vladimirovich, 1902-1941)

VERTINSKIY, K.I., prof.; ALIKAYEV, V.A., dotsent; PODKOPAYEV, V.M., dotsent; SHISHKOV, V.P., dotsent; ANDREYEV, I.A., veterin. vrach (Moskovskaya obl.); VLASOV, V.P., veterin. vrach (Moskovskayaobl.); MAMAYEV, A.P., veterin.vrach (Moskovskaya obl.); SHUL'GOVSKIY, I.P., veterin. vrach (Moskovskaya obl.)

Diagnosis, therapy, and prophylaxis of toxic dyspepsia in calves.  
Veterinariia 41 no.1:59-64 Ja '65. (MIRA 18:2)

1. Moskovskaya veterinarnaya akademiya (for Vertinskiy, Alikayev, Podkopayev, Shishkov).

SHUL'GOVSKIY, V.V.

Bioelectrical activity of solitary neurons of the olfactory bulb in rabbits at various periods following deafferentation. Zhur. vys. nerv. defat. 16 no. 1:112-116 Ja-F '66 (MIRA 19:2)

1. Kafedra fiziologii vysshey nervnoy deyatel'nosti Moskovskogo gosudarstvennogo universiteta imeni M.V. Lomonosova i Institut defektologii Akademii pedagogicheskikh nauk RSFSR, Moskva. Submitted November 13, 1964.

ACC NR: AR6035292

SOURCE CODE:

AUTHOR: Fialko, Ye. Y.; Moysya, R. I.; Mel'nyk, V. I.; Kolomyets', H. I. --  
Kolomyets', A. R.; Yemel'yanov, I. M.; Shul'ha, A. I.; Yavlins'kyi, A. Ya.

TITLE: Radar set for observing the drift of meteor trails.

SOURCE: Ref. zh. Astronomiya, Abs. 9.51.411

REF SOURCE: Visnyk Kyyivs'k. un-tu. Ser. astron., no. 7, 1966, 69-74

TOPIC TAGS: meteor trail, radar antenna, radar meteor observation, train drift

ABSTRACT: A description is given of a radar set designed at the Department of General Radio Engineering of Kiev University and which is intended for measuring the velocity and direction of the drift of ionized trains. The basic parameters of the equipment are as follows: frequency 34.47 mc; transmitter pulse power 100 kw; pulse duration 10  $\mu$ sec; sending frequency 500 cps; each fifth pulse is doubled; receiver sensitivity  $\sim 3 \mu$ v; receiver passband 600 kc. Identical type wave-duct five-element antennas are used for reception and transmission measurements of the drift velocity radial component is carried out by the pulse-coherent method. The

UDC: 523.164.85

Card 1/2

ACC NR: AR6035202

unit is equipped with a system of noise protection which makes it possible to select reflected signals on the basis of duration, amplitude and code. The equipment was tested in March—May 1964. Article includes a bibliography of 6 titles. V. Lebedinets. [Translation of abstract] [DW]

SUB CODE: 03, 09/

Card 2/2

USSR/Microbiology - Microorganisms Pathogenic to Humans and  
Animals.

F-4

Abs Jour : Ref Zhur - Biol., No 10, 1958, 43348

Author : ~~Shulichenko, A.I.~~

Inst :

Title : Study of Child Reactivity to Subcutaneous and Intranasal  
Immunization by Scarlet Fever Toxin.

Orig Pub : Tr. Kharkovsk. n.-i. in-ta vaktsin i syvorotok, 1957, 24,  
107.

Abstract : No abstract.

Card 1/1

h1

SHULICHENKO, A. I.

USSR / Microbiology. Microbes Pathogenic to Man and F-5  
Animals. Bacteria. Bacteria of the Intestinal  
Group.

Abstr Jour: Ref Zhur-Biol., No 16, 1958, 72182.

Author : Romashko, Yu. V.; Shulichenko, A. I.; Ischenko-  
Linnik, K. M.

Inst : Kharkov Scientific-Research Institute of Vaccine  
and Sera.

Title : Enteral Vaccination as a Method of Development of  
Chronic Dysentery.

Orig Pub: Tr. Khar'kovsk. n.-i. in-ta vaktsin i syvorotok,  
1957, 24, 241-249.

Abstract: No abstract.

Card 1/1



MIKULINSKAYA, R.M.; FYADINA, D.D.; DROMASHKO, A.I.; SHULICHENKO, A.I.;  
ROMASHKO, Yu.V.; ZLATOPOL'SKAYA, R.D.; BERGOL'TSEVA, L.A.; VEREZUB,  
I.G.; CHAYKINA, T.N.; YEMEL'YANOVA, O.I.; GINZBURG, L.Ya.; GOLODYUK,  
L.F.; HUMYANTSEVA, I.V.; VYCHEGZHANIN, A.G.; GOL'DENBERG, R.A.

Data on the study of the epidemiological effectiveness of vaccination  
against influenza in Kharkov in October 1957. Vop.virus. 4 no.4:407-  
411 J1-Ag '59. (MIRA 12:12)

1. Khar'kovskiy institut vaktsin i syvorotok imeni I.I. Mechnikova.  
(INFLUENZA, prevention & control)

SHULICHENKO, A. I., Cand Med Sci -- "Application of enteric vaccination for ~~the~~  
detection of patients affected with *atypical, bititerated, and chronic* ~~chronic, atypical, and effaced~~ forms of  
dysentery." Khar'kov, 1960 (Khar'kov Med Inst). (KL, 1-61, 212)

-449-

BARANSKA-GACHOWSKA, Maria; LUCIAK, Mieczyslaw; SHULIK, Jozefa

The influence of estrogens and progesterone on the mucous membrane of the oral cavity in albino rats. Czas. stomat. 18 no.11:1285-1291 N ' 65.

1. Z Zakladu Stomatologii Zachowawczej Slaskiej AM w Zabrze (Kierownik: doc. dr. W. Zaleski) i z Zakladu Anatomii Patologicznej Slaskiej AM w Zabrze (Kierownik: prof. dr. W. Niepolomski).

L 6694-65 ENT(m)/EFF(n)-2/ENP(q)/ENP(b) Pu-4 ASD(m)-3/ASD(r)/SSD/

AFWL/ESD(t)/RAEM(t) JD/JG/MLK

ACCESSION NR: AT4046328

S/0000/64/000/000/0059/0066

AUTHOR: Bogdanova, V. I.; Shulik, L. S.

TITLE: Acid chrome violet "K" as a reagent for molybdenum

SOURCE: AN SSSR. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii. Khimicheskii analiz mineralov i ikh khimicheskii sostav (Chemical analysis of minerals and their chemical composition). Moscow, Izd-vo Nauka, 1964, 59-66

TOPIC TAGS: azo dye, acid chrome violet, molybdenum, quantitative analysis, complex formation, molybdenum determination, colorimetric analysis

ABSTRACT: The reaction between molybdenum and the azo dye acid chrome violet "K" (ACVK) has been proven to be satisfactory for the quantitative determination of molybdenum. Since ACVK imparts a red-violet color to molybdenum, a light filter with a maximum at 570-80 mμ was selected for the spectrophotometric measurement. It was found that with 5 ml of a 0.03% acetone-H<sub>2</sub>O solution (1:1) of ACVK in 50 ml of solution, Beer's law is observed over the range 10-100 μg of Mo. The use of 15 ml ACVK in a 50 ml volume extends the compliance range to 10-400 μg. With an increase in dye concentration, the slope of the line becomes steeper, and the method more sensitive. This was borne out by molar extinction coefficient values.

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L 6694-65

ACCESSION NR: AT4046328

The slope changes are probably due to complex formation by molybdenum; these complexes are quite stable with time (1-24 hrs.). A deviation in the maximum absorption (not exceeding 10%) is also seen with varying quantities of ACVK. Increasing the acidity of the molybdenum complex and ACVK with 2-10 ml HCl (1:1) in 50 ml causes an insignificant change in optical density (10%). The determination of Mo is not hindered by the presence of Li, Te, Na, Cu, Mg, Ca, Zn, Sn, Ce, Sb, Cd, Pb, Ni, Al, La or Ti. Zr and W do not interfere in small quantities (Zr up to 100 µg and W up to 1000 µg), but Nb does interfere. The anions Cl, F, NO<sub>3</sub>, BO<sub>3</sub>, SO<sub>4</sub>, PO<sub>4</sub> and CO<sub>3</sub> have no effect. Tartaric and citric acid in large quantities lower the molybdenum complex extinction, and oxalate ion destroys the Mo complex. Interference by Nb can be eliminated by the use of NH<sub>4</sub>F. To counteract the effect of Zr, a 2% Trilon solution was used. Orig. art. has: 6 figures, 3 tables, and 3 structural formulas.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii, AN SSSR (Institute of Mine Site Geology, Petrography, Mineralogy and Geochemistry, AN SSSR)

SUBMITTED: 16Apr64

ENCL: 00

SUB CODE: IC

NO REF SOV: 012

OTHER: 004

Card 2/2

MARKIN, A.Ye.; SHUIIK, Ye.M.

Increasing the cutting speed of disk shears. Sbor.rats.predl.vnedr.v  
proizv. no.1:16-17 '61. (MIRA 14:7)

1. Alchevskiy metallurgicheskiy zavod.  
(Shears (Machine tools))

ACC NR: AP6026795

(A)

SOURCE CODE: UR/0198/66/002/007/0058/0064

AUTHOR: Mitkevich, V. M. (Khar'kov); Shulika, A. K. (Khar'kov)

ORG: Khar'kov Branch, Institute of Mechanics, AN UkrSSR  
(Khar'kovskiy filial Instituta mekhaniki AN UkrSSR)

TITLE: The effect of stiffening shallow shells of revolution subject to symmetrical loading

SOURCE: Prikladnaya mekhanika, v. 2, no. 7, 1966, 58-64

TOPIC TAGS: revolution shell, conical shell, conical shell frustum, stiffened shell, ~~stiffened conical shell~~ <sup>structure</sup>, strain, elastic stress, computer calculation, digital computer

ABSTRACT: A discussion is presented of the relationship between the stiffening of shallow shells of revolution by stringers in the meridional direction and the stress and strain states in the shells. The case of a frustum of a conical shell with stiffeners in the longitudinal direction is analyzed. The slope angle of the shell varies from zero to  $\pi/6$ . The shell is considered structurally orthotropic on the basis of known equilibrium equations (in terms of forces and moments) for an element of an axisymmetric shell, elasticity relationships, and equations for continuity of strains in the middle surface. The problem is reduced to the solution of a system of five regular differential equations. The system was integrated by the numerical Adams method on an Ural-2 electronic digital computer. A standard program developed

Cerd 1/2

1. 20.002-16  
ACC NR: AP6026795

at the Institute of Mechanics of the Academy of Sciences Ukrainian SSR was utilized. The calculations were carried out for frustums of conical shells of constant thickness (plain and stiffened by constant-cross-section stringers). The bottom base of the shells was fixed; the upper was free. Two cases of loading were considered: constant internal pressure and axial force. The results obtained are plotted in diagrams and compared, and the effects of stiffening on certain stress and strain parameters for various slope angles are discussed. Orig. art. has: 5 figures, 1 table, and 10 formulas. [VK]

SUB CODE: 20/ SUBM DATE: 020ct65/ ORIG REF: 006/ ATD PRESS: 5050

Card

2/2 H/S



SHULIKA, L.G., inzhener.

Changes in the pressure-responsive device for regulating the output of 55-V compressors. Prom. energ. 11 no.10:13 0 '56. (MLRA 9:11)

1. Zavod "Svet shakhtera."  
(Air compressors)

Shukhba, M. H., ~~master~~ Agric Sci—(USSR) "The structural and physiological characteristics of the silk-producing glands of highly productive types of silkworm."

Askenabad, 1957, 1999. (Min Agric USSR. Tashkent Agric Inst), 120 copies.

(AB, No 41, 1957, p. 109)

SHULIKA, M.N.

Characteristics of the silk gland in highly productive varieties  
of silkworms. Izv.AN Turk.SSR no.2:86-91 '57. (MLRA 10:5)

1. Turkmenskiy nauchno-issledovatel'skiy institut zhivotnovodstva  
i veterinarii.  
(Silkworms)

MAMFONIAZOV, O.N.; SHULIKA, M.N.; GLADYSHEVA, L.Ye.; BUSHLYAKOVA, N.D.  
BIRYUKOVA, N.V.

Effect of vitamins B<sub>12</sub> and B<sub>6</sub> on the growth and development  
of silkworm caterpillars. Izv. AN Turk. SSR. Ser. biol. nauk  
no.3:50-54 '65. (MIRA 18:9)

1. Institut zoologii i parazitologii AN Turkmenkoy SSR.

USSR/Farm Animals. Silkworm.

Q

Abs Jour: Ref Zhur-Biol., No 17, 1958, 78856.

Author : ~~Shulika, M.N.~~

Inst : AS Turkmen SSR.

Title : Features of the Silk-Excreting Glands of High  
Productive Breeds of Bombyx.

Orig Pub: Izv. AN TurkmSSR, 1957, No 2, 86-91.

Abstract: The histological structure and secretory activity  
was studied of the silk-excreting glands (SG)  
of the bombyx breeds Shantung, Caucasus Green,  
Japanese bivoltine 115, Dagdad, SANIISH [Central  
Asia Scientific Research Institute of Sericulture]-  
E2, SANIISH-11 X SANIISH-18 and Chinese 108. Size  
and number of cells were studied in the various  
sections of the gland in caterpillars of the V

Card : 1/

MAMEDNIYAZOV, O.N.; SHULIKA, M.N.; KASPAR'YANTS, L.R.; GLADYSHEVA, L.Ye.

Data on the content of nucleic acids in silk glands of different varieties of silkworms. Izv. AN Turk. SSR. Ser. biol. nauk  
no.1:67-69 '62. (MIRA 15:3)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR.  
(SILKWORMS)  
(NUCLEIC ACIDS)

MAMEDNIYAZOV, O.N.; SHULIKA, M.N.; GLADYSHEVA, L.Ye.; BUSHIYAKOVA, N.B.

Effect of vitamin B<sub>12</sub> on the growth and development of caterpillars  
and the manifestation of jaundice in mulberry silkworm. Izv. AN  
Turk. SSR. Ser. biol. nauk no.2:30-34 '64. (MIRA 17:6)

1. Institut zoologii i parazitologii AN Turkmenskoy SSR.

SHULIKA, N. G., KRUPNIK, L. I.,

"Plasma Study by Fast Particle Beam Sounding"

report presented at the 6th Intl. Conf. on Ionization Phenomena in Gases,  
Paris, France, 8-13 Jul 63



ACCESSION NR: AT4025305

S/0000/63/000/000/0154/0162

AUTHORS: Konovalov, I. I.; Krupnik, L. I.; Onishchenko, I. N.;  
Shulika, N. G.

TITLE: Use of mass spectrograph to obtain quantitative data on the  
composition of plasmoids

SOURCE: Diagnostika plazmy\* (Plasma diagnostics); sb. statey. Mos-  
cow, Gosatomizdat, 1963, 154-162

TOPIC TAGS: plasmoid, plasma source, mass spectrograph, ionized  
plasma, plasma research, magnetic mirror

ABSTRACT: In order to prevent the polarization of a slow plasma  
and other effects from distorting the results of mass-spectrographic  
analysis of the plasma, an instrument is proposed in which the ion  
beam is drawn out from the analyzed plasma and is simultaneously  
accelerated to 20 keV in the gap of the mass spectrograph. The ener-

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ACCESSION NR: AT4025305

gy spectrum of the plasma ions appears as a corresponding spread over this constant level. The construction of the mass spectrograph is described briefly. The ions were registered with thin-layer emulsions which could be moved in and out of the mass spectrograph without breaking the vacuum. Individual experiments were made to study the density of the image produced on the emulsion as a function of the number of  $H_1$ ,  $H_2$ ,  $H_3$ ,  $He_4$ ,  $C_{12}$ ,  $N_{14}$ , and  $O_{16}$  positive ions with energies from 10 to 20 keV. The apparatus used to calibrate the photographic emulsions is described. Much space is devoted in the article to the various factors influencing the emulsion density. The method described was used to obtain the mass-spectroscopic and energy characteristics of conical and coaxial plasma sources. It is concluded that the described method can be used to extract a great variety of information on the properties and behavior of the plasma. Orig. art. has: 9 figures and 1 table.

ASSOCIATION: None

Card 2/5

ACCESSION NR: AT4025305

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 02

SUB CODE: ME

NR REF SOV: 001

OTHER: 003

Card 3/5

ACCESSION NR: AT4025305

ENCLOSURE: 01

Ion	H <sub>1</sub>	H <sub>2</sub>	O <sup>+</sup>	C <sup>+</sup>	Si <sup>+</sup>	N <sup>+</sup>	C <sup>+</sup>	O <sup>+</sup> , N <sup>+</sup> "ap"	etc
	%								
	53	1,5	17	11	5	4	3,7	5	

Percentage content of ions in a plasmoid  
from a conical source

Card 4/5

ACCESSION NR: AT4025311

S/0000/63/000/000/0212/0222

AUTHORS: Krupnik, L. I.; Shulika, N. G.

TITLE: Investigation of plasmoids by means of a beam of fast neutral atoms

SOURCE: Diagnostika plazmy\* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 212-222

TOPIC TAGS: plasmoid, plasma source, plasma density, discharge plasma, plasma research, plasma interaction

ABSTRACT: An experimental setup was constructed making it possible to probe hydrogen plasmoids by means of a beam of fast neutral hydrogen atoms. The operation of the apparatus is described and the effect of the presence of unionized gas molecules in the plasma and of heavy-ion and heavy-atom impurities in the plasma is analyzed. A Thompson mass spectrometer was used to monitor the purity of the

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ACCESSION NR: AT4025311

plasma (permissible impurity content 20%). The method has been employed to study the density and structure of a plasmoid produced by a conical plasma source. The quantities measured were the attenuation of the neutron beam in the chamber without a discharge, the interaction between the neutral beam and the plasmoid, the interaction between the neutral beam and the frontal part of the plasmoid, the dependence of the plasmoid density on the plasma source voltage, and the effect of the magnetic field on the density of the plasmoid traveling through a large distance. At a density of approximately  $10^{15} \text{ cm}^{-3}$  the attenuation of the sounding beam reached 70--80%. The measurement error does not exceed 20%. Orig. art. has: 7 figures and 1 table.

ASSOCIATION: None

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 02

SUB CODE: ME

NR REF SOV: 004

OTHER: 001

Card 2/4

ACCESSION NR: AT4025316

S/0000/63/000/000/0256/0262

AUTHORS: Krupnik, L. I.; Shulika, N. G.

TITLE: Use of plasmoscope for visual observation of the behavior of a dense plasma in a longitudinal magnetic field

SOURCE: Diagnostika plazmy\* (Plasma diagnostics); sb. statey. Moscow, Gosatomizdat, 1963, 256-262

TOPIC TAGS: plasmoid, plasma research, plasma density, plasmoid , acceleration, discharge plasma

ABSTRACT: Apparatus (plasmoscope) for visual observation of plasma formations of low density ( $10^{10}$  --  $10^{11}$   $\text{cm}^{-3}$ ), first described by L. A. Artsimovich ("Upravlyayemy\*ye termoyaderny\*ye reaktsii," M., Fizmatgiz, 1961) has been modified slightly to use to observe the behavior of dense plasmoids (up to  $10^{15}$   $\text{cm}^{-3}$ ) moving in a longi-

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ACCESSION NR: AT4025316

tudinal magnetic field. The optimal plasmoscope parameters necessary for the purpose are established and the dependence of the diameter of the dense part of the plasmoid on the magnetic field applied along the plasmoid propagation axis was determined by photography. It was found originally that in magnetic fields with  $H > 800$  Oe the plasmoid remained practically constant in diameter. However, a recheck on the result, by reducing the number of grounded grids and thereby increasing the density of the plasma reaching the scintillator, showed that the diameter decreases with decreasing number of attenuating grids. In an attempt to explain this fact it is suggested that with decreasing number of grids a larger current charges the plasmoscope capacitor before the bulk of the plasma reaches it. This hypothesis was checked experimentally by using different capacitors in the plasmoscope supply circuit. The results confirm the assumptions that the plasmoid increases from its "head" towards its "tail" and predicts the possibility of determining the variation of the plasmoid cross section along its length by apply-

Card 2/5



ACCESSION NR: AT4025316

ing short-duration voltage pulses to the plasmoscope. Orig. art.  
has: 6 figures.

ASSOCIATION: None

SUBMITTED: 19Oct63

DATE ACQ: 16Apr64

ENCL: 02

SUB CODE: ME

NR REF SOV: 000

OTHER: 000

Card 3/5

ACCESSION NR: AT4025316

ENCLOSURE: 01

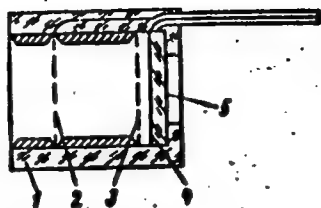


Diagram of plasmascope

1 - Plexiglas container, 2 - first grid,  
3 - second grid, 4 - scintillator side coated  
with thin aluminum layer, 5 - plate of  
plastic scintillator

Card 4/5

ACCESSION NR: AT4025316

ENCLOSURE: 02.

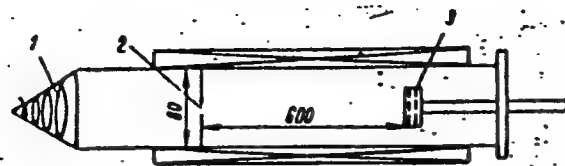


Diagram of experimental set-up

- 1 - conical plasma source, 2 - diaphragm,  
3 - plasmascope

Card 5/5

ACCESSION NR: AT4036079

8/2781/63/000/003/0353/0357

AUTHORS: Krupnik, L. I.; Shulika, N. G.

TITLE: Study of the blackening of photographic plates under the influence of a beam of positive ions

SOURCE: Konferentsiya po fizike plazmy\* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy\* i prob-  
lemy\* upravlyayemogo termoyadernogo sinteza (Plasma physics and prob-  
lems of controlled thermonuclear synthesis); doklady\* konferentsii, .  
no. 3, Kiev, Izd-vo AN UkrSSR, 1963, 353-357

TOPIC TAGS: plasmoid, plasma research, photographic emulsion, ion-  
ized plasma, ion beam, ion source

ABSTRACT: The blackening of photographic plates as a function of the  
number of  $H_1^+$ ,  $H_2^+$ ,  $H_3^+$ ,  $He_4^+$ ,  $C_{12}^+$ ,  $N_{14}^+$ , and  $O_{16}^+$  ions with energies from

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10 to 20 keV was investigated in view of the possible use of photographic emulsions to determine qualitatively the composition of plas-  
moids. The ions were produced with a high-frequency ion source  
focused, mass analyzed, collimated, and cleared of neutral particles  
after which they struck the photographic plate. The measurement  
procedure and the apparatus are described. The plates were developed  
and the density measured with a microphotometer. All the ions pro-  
duced saturation, indicating that all grains of the emulsion reacted  
with the ions and a further increase of the charge does not increase  
the intensity. The photographic blackening also decreases uniformly  
with the increasing mass. The errors of the procedure are discussed  
briefly. Orig. art. has: 7 figures and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 21May64

ENCL: 02

SUB CODE: EM

NR REF SOV: 000

OTHER: 000

Card 2/4

ACCESSION NR: AT4036079

ENCLOSURE: 01

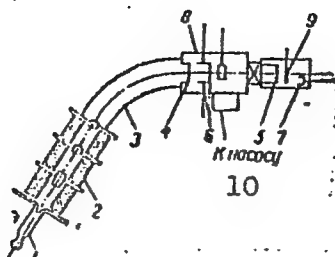
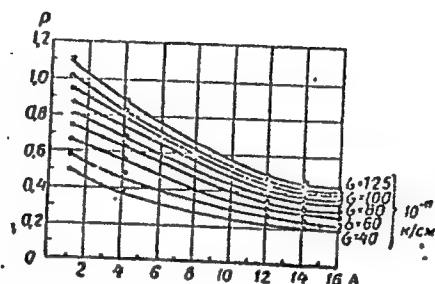
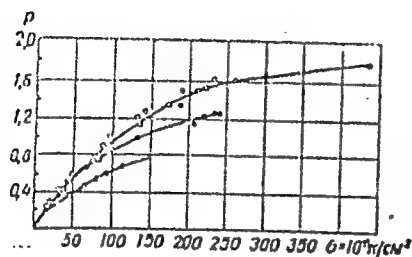


Diagram of set-up: 1 - hf ion source, 2 - three electrode lens, 3 - monochromator, 4 - diaphragm, 5 - diaphragm, 6 - condenser, 7 - Faraday trap, 8 - vacuum chamber, 9 - nuclear emulsion, 10 - to pump.

Card 3/4

ACCESSION NR: AT4036079

ENCLOSURE: .02



Left - typical blackening vs. charge per unit area ( o -  $H_1^+$ ,  
 $\bullet$  -  $H_2^+$ ,  $\Delta$  -  $H_3^+$  at 20 keV). Right - dependence of blackening on  
the mass (the parameter is the charge per unit area)

Card 4/4

L 43912-66 EWT(1) IJP(c) AT/GD

ACC NR: AT6020405

(N)

SOURCE CODE: UR/0000/65/000/000/0084/0089

AUTHOR: Krupnik, L. I.; Shulika, N. G.; Demchenko, P. A.

ORG: none

TITLE: Behavior of plasmoids in the longitudinal magnetic field

SOURCE: AN UkrSSR. Issledovaniye plazmennyykh sgustkov (Study of plasma clusters). Kiev, Naukova dumka, 1965, 84-89

TOPIC TAGS: plasmoid, plasma magnetic field, plasma diagnostics, plasma injection, plasma density, magnetic mirror

ABSTRACT: The authors report attempts to investigate the entrance of a plasmoid into an axially-symmetrical magnetic field by sounding the plasma with beams. The sounding was carried out with beams of fast particles, using a procedure described earlier (in: Diagnostika plazmy, Gostomizdat, 1963, p. 212). The experimental setup was also described in detail in the earlier paper. The plasmoid was produced with a conical source with pulsed injection of gas (Yu. S. Azovskiy et al., ZhTF v. 34, 5, 841, 1964). The magnetic field could be made homogeneous or inhomogeneous by using two or one solenoids. Measurement of the distance between the movable solenoid producing the magnetic field and the point of fast-particle sounding made it possible to determine the influence of the magnetic field on the plasmoid properties. The results show that in a field up to 2500 Oe a plasmoid with charged-particle density  $10^{14} \text{ cm}^{-3}$ , bounded by a diaphragm 15 mm in dia., follows strictly the magnetic force

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L 43912-66

ACC NR: AT6020405

lines, and passes unchanged through the magnetic field gradient. No reflection of the plasmoid from the magnetic mirror or change in the density of the plasmoid were observed under these conditions. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 007

Card 2/2 pb

L 43797-66 EWT(1) IJP(c) GD/AT  
ACC NR: AT6020417 (N) SOURCE CODE: UR/0000/65/000/000/0188/0195

AUTHOR: Krupnik, L. I.; Shulika, N. G.; Demchenko, P. A.

7/  
BT/

ORG: none

TITLE: Determination of density, degree of ionization, and electron temperature of plasmoids by the method of fast particle beams

SOURCE: AN UkrSSR. Issledovaniye plazmennyykh sgustkov (Study of plasma clusters). Kiev, Naukovo dumka, 1965, 188-195

TOPIC TAGS: plasmoid, plasma gun, plasma electron temperature, ELECTRON DENSITY

ABSTRACT: The parameters of plasma injected from a conical gun were investigated using neutral hydrogen and proton beams of various energies. This type of probing makes it possible to determine electron density, temperature and the degree of ionization as functions of time. Electron temperature measurements were supplemented by a spectroscopic method. These measurements helped to establish a gun operation regime producing impurity-free plasma with good repeatability from shot to shot. The absorption of the heavy particle beam was found to be quite useful since the plasma dynamics could be followed with approximately 30% accuracy without any significant interaction with the plasma. The measurements show that the plasma ejected from the gun has a forward part consisting of pure hydrogen with about 90% ionization. Its electron tempera-

Card 1/2

ACC NR: AT6020417

ture reached some 60 to 80 ev. The tail part of the plasma carried large amounts of impurities (70%) and its temperature was quite low. The density of the forward part was about  $10^{13} \text{ cm}^{-3}$  and that of the tail part about ten times higher. Typical time variation of these quantities is shown. Orig. art. has: 1 table, 3 figures, 4 formulas.

SUB CODE: 20/

SUBM DATE: 11Nov65/

ORIG REF: 007/

OTH REF: 002

Card 2/2 *slw*

L 43796-66 EWT(1) IJP(c) GD/AT

ACC NR: AT6020418

(N)

SOURCE CODE: UR/0000/65/000/000/0195/0203

AUTHOR: Krupnik, L. I.; Shulika, N. G.; Demchenko, P. A.

ORG: none

TITLE: Impingement of plasmoids on a metallic surface

SOURCE: AN UkrSSR. Issledovaniye plazmennyykh sgustkov (Study of plasma clusters).  
Kiev, Naukovo dumka, 1965, 195-203

TOPIC TAGS: plasmoid, plasma diagnostics, plasma generator, plasma density, METAL SURFACE

ABSTRACT: Various aspects of the problem of colliding plasmas with metallic walls were studied using a conical plasma generator injecting plasma into a channel where diagnostic measurements on plasma properties were made. At the end of the channel, a reflecting metallic surface was set at 45°. The reflected plasma diagnostics were made in the vessel behind the reflector set at 90° to the incident plasma channel. The main tools for plasma analysis was the mass spectrograph and neutral atom beam. It has been shown that in the region of 1 to 2 cm from the reflector the plasma density increased by about a factor of 10. It is not clear what mechanism is responsible for such density increase. The mean energy of the particles in the investigated plasma changes by an insignificant amount with some addition of impurities from the reflecting surface. This is in contrast to work of A. A. Kalmykov, et al (ZhTF, 1964, 34,

Card 1/2

L 43796-66

ACC NR: AT6020418

8, 1423) where large peaks were found in the energy spectrum of reflected particles. The impurity composition was determined for several voltage regimes in the plasma generator giving the most efficient operation of the reflector. The coefficient of reflection was not studied in detail; its value (ratio of reflected number of particles to that of incident) is about 1:10. Orig. art. has: 5 figures.

SUB CODE: 20/

SUBM DATE: 11Nov65/

ORIG REF: 006

Card 2/2 *pla*

L 49246-65 EWT(1)/EPF(n)-2/EWG(m)/EPA(w)-2 Pz-6/Po-4/Pab-10/Pi-4 IJP(c) WW/AT

UR/0057/65/035/004/0711/0716

ACCESSION NR: AP5010809

AUTHOR: Krupnik, L.I.; Shulika, N.G.; Demchenko, P.A.

TITLE: Development of a fast particle beam plasma probing technique for investigating plasma bursts 59  
B

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 4, 1965, 711-716

TOPIC TAGS: plasma diagnostics, hydrogen plasma, ion beam, atom beam, ionization, particle density

ABSTRACT: The authors have previously determined the particle density in highly ionized plasma bursts by measuring the decrease in the intensity of a hydrogen atom beam occasioned by its traversing the plasma (Sb. "Dagnostika plazmy". Gosatomizdat, p.212, 1963; Doklad na IV Mezhdunarodnoy konferentsii po ionizatsionnym yavleniyam v gazakh, iyul', Parizh, 1963 /Report at the 4-th International Conference on Ionization Phenomena in Gases, Paris, July 1963/). In the present paper they extend this method to the case in which the degree of ionization is not known, is not necessarily large, and is to be determined along with the density. The requisite additional information is obtained by employing two particle beams

Card 1/3

L 49246-65

ACCESSION NR: AP5010809

(or a single composite beam) either of atoms of different energies or of atoms and ions. Measurements of hydrogen plasma bursts were performed with the apparatus described in detail in the references cited above. In one set of experiments, hydrogen plasma bursts from a conical plasma gun were traversed by a beam containing both hydrogen atoms and hydrogen ions. The beam was obtained from a proton beam by charge exchange collisions in a gas chamber and the separate constituents were detected by the method of V.V. Afrosimov et al. (ZhTF, 30, 1470, 1960) involving production of secondary electrons on targets, plastic scintillators, and photomultipliers. After passage of the highly ionized head of the burst, the ionization fell to 20%, then increased to a second maximum of 30% just before the region of maximum density, and subsequently decreased monotonically. The particle density was also measured with an electrostatic probe; the probe and particle beam measurements were in good agreement. Experiments were also performed with beams of 4 and 12 keV hydrogen atoms. These experiments are said also to have given satisfactory results, but they are only briefly described. Probe beams containing both atoms and ions are preferable to those containing only atoms of different energies, but they cannot be employed when the plasma burst moves in a magnetic field. The cross sections for all the interaction processes between the probe-beam and plasma particles must be known; this condition is met when a hydro-

Card 2/3

L 49246-65

ACCESSION NR: AP5010809

gen plasma is probed with a hydrogen beam. Orig. art. has: 4 formulas, 4 figures, and 1 table.

ASSOCIATION: None

SUBMITTED: 20Apr64

ENCL: 00

SUB CODE: ME

NR REF SOV: 006

OTHER: 001

Card *sr* 3/3



S/145/60/000/009/011/01  
D221/D304

AUTHORS: Andrushevich, Yu.M., Assistant, Klebanov, M.K., Candidate of Technical Sciences, Docent, Sharapov, A.A., Assistant, and Shulikin, K.I., Assistant

TITLE: On the transient processes in a machine tool with starting clutches

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 9, 1960, 104 - 112

TEXT: An experimental investigation was carried out to determine the effect of the friction clutch on transient processes in a screw cutting lathe, model 1K62. This was achieved with the use of capacitance transducer and oscillograph, and controlling the machine by both the frictional clutch and the motor. The reduced moments of inertia in respect to the starting shaft (link II) and the rotor of the motor (link I) were calculated. The changes due to different spindle speeds were plotted, and these demonstrate a stepped character. Minimum reduced moment of inertia and the least variation

Card 1/3

S/145/60/000/009/011/017  
D221/D304

On the transient processes in ...

riation is observed with starting and stopping the motor. Starting with the friction clutch increases the maximum moment reduced to link II and lowers the torque. The presence of overdrive in the reverse motion increases sharply the reduced moments. The ratio of nominal torque at the reduced shaft (link II with frictional clutches) to the reduced moment of inertia at  $n = 12.3$  rpm, when starting and stopping with the friction clutch is

$$j = \frac{M_{\text{nom}}}{I_{\text{red}}} = \frac{12.0}{0.0106} \approx 1130 \text{ sec}^{-2}.$$

At  $n_{\text{sp}} = 167$  rpm,  $j = 43 \text{ sec}^{-2}$ . During reversing at  $n_{\text{sp}} = 12.3$  rpm  $j = 500 \text{ sec}^{-2}$ . The maximum of this ratio is taking place when starting with clutch at steps that correspond to  $12.3 - 100$  rpm of the spindle. The investigation permits the following conclusions: The acceleration of the drive as well as its deceleration are uniform. The same can be said about the reversal. The duration of the transient processes increases with a higher speed of the spindle, and this is marked at  $700 - 1000$  rpm. The mechanical brake of the lathe

Card 2/3

TSLAF, M.Ya., kand.tekhn.nauk, dotsent; PANOV, N.N., kand.tekhn.nauk,  
dotsent; SHARAPOV, A.A., inzh.; SHULIKIN, K.I., inzh.

Effect of the errors of elements of screw-cutting kinematic  
chains on the precision of machined screw threads. Izv.vys.-  
ucheb.zav.; mashinostr. no.2:203-211 '62. (MIRA 15:5)

1. Kuybyshevskiy industrial'nyy institut.  
(Screw cutting)

RUBINOV, D.Ya., Engn.; SHOLIKHA, V.A., Inzh.

Automatic device for installing fuse inserts in PN-2 protection  
units. Energ. i elektrotekh. prom. no.2:44-45 Ap-Je '65. (MIRA 18:8)

См. также.

Automatic pin-by-pin feed of bearings. Mashinostroenie  
no.3:71-72 My-Ja '65. (MIRA 18:6)

AUTHOR: Nosova, Z. A., and Shuliko, L. F.

TITLE: Single-stage Baking of Glazed Facing Tiles (Odnokratnyy Obzhig glazurovannykh oblitsovochnykh plitok)

PERIODICAL: Steklo i Keramika, 1957, Vol. 14, No. 1, pp. 12-15 (U.S.S.R.)

ABSTRACT: The single-stage baking of glazed facing tiles in a series of several hundred thousand pieces was conducted at temperatures of from 1230 - 1280°. This process was conducted at the Ceramic-Tile Factory imeni Bulganin (keramiko-plitochnoy zavod imeni Bulganina) and described in an article published in No. 12, 1954, of this publication. However, during the past two years in newly constructed plants equipped with continuous operation drying ovens and furnaces, the baking temperature was lowered to 1180° and 1120°, and the thickness of tiles was decreased from 6 to 5 and then to 4.5 mm. At the same time, the feldspatic hard glaze with zircon was substituted with a lead borate glaze. In connection with these changes in production, a series of tests were conducted in 1955 at the Kutoyarsk Plant of Acidproof Products, in cooperation with employees of the Scientific Research Institute for Structural Ceramics (NIIstroykeramiki), to determine some of the technological and economical aspects of this process and its possible adaptation in new plants.

Card 1/2

### Single-stage Baking of Glazed Facing Tiles

Tiles of various clay compositions were glazed at a rate of 1.6 and 1 m/sec., with a glaze density of from 1.45 - 1.5 g/cm<sup>2</sup>, and baked at temperatures of from 1120 - 1200°. The baking and cooling was performed in 30 - 35 hours. Tests results obtained from a single-stage baking of various type tiles are indicated in table No. 1. According to calculations performed by B. M. Gartsman and D. L. Sokolin (NIIstroykeramika), the single-stage baking increases the production 1.6 - 1.8 times and lowers the cost by 17 - 22%.

There are no references.

ASSOCIATION: Scientific-Research Institute for Structural Ceramics (NIIstroy mash)

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2

SHULIKO, L. F.

15  
2

New body compositions for glazed tiles. L. F. Shuliko, *Steklo i Keram.* 14, No. 4, 18-19 (1957). In the manuf. of glazed tile in the Soviet Union, a body (1) consisting of a New Switzerland clay 28, raw kaolin 31, quartz sand 26, and grog (reclaimed breakage) 15% is generally used. In some cases, 20-25% of the latter can be used. Rejects in the drying, biscuit burning, and glazing operations may go as high as 35-40%, of which 30% is due to cracking and deformation. Notable improvement was obtained in exptl. studies by the addn. of kaolin calcined at 1350° according to formulas (2), (2a), and (2b), resp., as follows: clay 28, 28, and 29; kaolin (raw) 22, 22, and 22; sand 7.5, 17.5, and 22.5; grog 12, 12, and 12; calcined kaolin 30, 20, and 15; dolomite 0.5, 0.5, and 0.5%. The test pieces were dried in tunnel driers to 1% of moisture; biscuit and glaze firing temps. were 1250-80° and 1160-80°, resp. Glaze compn. was SiO<sub>2</sub> 42.2, Al<sub>2</sub>O<sub>3</sub> 7.2, CaO 8.1, R<sub>2</sub>O 10.3, ZnO 3.5, B<sub>2</sub>O<sub>3</sub> 7.2, and PbO 19.5%. Limits of bending strength (kg./sq. cm.) of (1), (2), (2a), and (2b) in the raw pressed state were 8, 9.8, 9.6, and 9.3, resp.; after drying 16.3, 26.8, 25.7, and 24.1. Rejects of (1) and (2a) by cracking were, in biscuit firing, 18.9 and 4.4, and in the glazing, 2.6 and 2.0%, resp.

H. L. Olin

Ph



SHULIKO, L.F.

Glazed facing tiles in Czechoslovakia. Stek.i ker. 14 no.6:26-28  
Je '57.

(MLRA 10:7)

(Czechoslovakia--Tiles)

AUTHOR: Shuliko, L. F. SOV/72-58-9-17/20

TITLE: Production of Glazed Tiles in the German Democratic Republic  
(Proizvodstvo oblitsovechnykh glazurovannykh plitok v GDR)

PERIODICAL: Steklo i keramika, 1958, <sup>15</sup>Nr 9, pp 43 - 44 (USSR)

ABSTRACT: In spite of the fact that in the German Democratic Republic only raw materials of comparatively low quality are used for the production of glazed tiles they are of a quality not liable to objections. Owing to a good organization and control of production raw materials of differing composition can be used without curtailing the stability of the charges. Samples of the raw materials delivered are checked as to their texture and composition. If it stands this test to satisfaction it is stored horizontally, whereas it is extracted vertically. Thus a good mixing and an equal average composition is ensured. If the sample taken from a lot does not meet the standard, the lot is stored separately and investigated more closely. The composition of the charges in the Factory Beutzenburg as compared to that used customarily in Soviet Plants contains by 10% more of quartz and by 10% less of kaolin

Card 1/3

Production of Glazed Tiles in the German Democratic Republic SOV/72-58-9-17/20

and by 7% less of cullet. All components of the charges, with the exception of kaolin, are treated by wet grinding. Admixtures of 0,3% of  $\text{BaCO}_3$ , 0,04% of  $\text{CoSO}_4$  and 0,2% of  $\text{Na}_2\text{CO}_3$  are added. The tiles are pressed on automatic Raysman-type friction presses. The arrangement of the working place of the press operator is found to be particularly interesting, as the furnace cart is run right through to the press on a device which permits its being lifted and shifted to the right and to the left. The press operator watches the operation of the press and places the raw tiles on the bottom of the cart. One cart takes 9540 tiles with a thickness of 4 mm. The loaded cart is taken to a hot room where the raw tiles are dried at  $30^\circ$  to a humidity of 30% during two days. Subsequently they are dried in tunnel drying plants to a humidity of 1,5% at a temperature of  $120^\circ$  in the course of 60-70 hours. They are then baked in tunnel furnaces at a maximum temperature of  $1280^\circ$ , the baking period is 96 hours. The temperature curve is given in a figure. All work that comes after baking is carried out by continuous methods. The glaze

Card 2/3

Production of Glazed Tiles in the German Democratic Republic

SOV/72-58-9-17/20

baking is done in muffle furnaces of the system Dressler or of the system Kerabedarf, respectively. The technical data of these furnaces are given in the table. The maximum baking temperature of glaze baking is 1120-1140°, the baking period is 24-26 hours. Emphasis is laid on the good organization of the inspection of the finished products, on the good quality of the tiles, and on the low percentage of products below standard. There are 1 figure, 1 table, and 1 reference, 1 of which is Soviet.

Card 3/3

SHULIKO, L.F., kand.tekhn.nauk; POLUBOYARINOV, D.N., prof., doktor  
tekhn.nauk

Sintering of mullite, synthesized from highly dispersed  
alumina, kaolin, clay and quartz. Trudy NIISTroikeramiki no.13:  
72-92 '58. (MIRA 12:5)  
(Mullite) (Chemistry, Technical)

BLOKH, G.S., kand.tekhn.nauk; SHULIKO, L.F., kand.tekhn.nauk

Technological layouts and parameters of the production of  
glazed facing tiles in an automated plant. Trudy NIISTroiker-  
amiki no.16:3-14 '60. (MIRA 15:2)

(Ceramic plants)  
(Tiles)

BLOKH, G.S.; SHULIKO, L.F.; ROKHVARGER, Ye.L.

Mechanized flow-line production of facing tiles by casting on  
conveying units. Stek. 1 ker. 18 no.2:1-5 F '61. (MIRA 14:3)  
(Tiles)

BLOKH, G.S.; SHULIKO, L.F.

Systems for an automated factory for the quick firing of facing  
tiles. Stek. i ker. 18 no.6:17-23 Je '61. (MIRA 14:7)  
(Kilns) (Tiles)



SHULIKO, L. F., kand. tekhn nauk; YUNGLEYSTER, A. B. kand tekhn nauk;  
GAVRILOV, N. S., inzh.

Rapid firing of tiles produced by the casting method. Trudy  
NIISTroikeramiki no. 19:16-22 '62. (MIRA 17:5)

SHULIKO Y.M.  
SALAMATOV, I.I., inzhener; YEMAKOV, I.S., inzhener; SHAKHOV, F.N., inzhener;  
SHULIKO, Ya.Y., inzhener.

Principles and methods of normalization and unification in machine construction for the chemical industry. Standartizatsiia no.3:9-22 My-Je '54.  
(MLRA 7:6)

1. NIIKhIMMASH. (Chemical engineering--Standards)

SALAMATOV, I.I., inzhener; SHULIKO, Ya.V., inzhener;

Reducing design workload by employing normalization techniques.  
Standartizatsiya no.6:10-21 N-D '55. (MLRA 9:2)

1.Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya  
(Machinery--Design) (Standards, Engineering)

SALAMATOV, I.I., inzhener; SHULIKO, Ya.V., inzhener.

Reasons for specialization in the chemical machinery industry.

Standartizatsiia no.6:23-25 N-D '56.

(MLRA 10:1)

1. Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya.  
(Chemical apparatus—Standards)

AUTHOR: Shuliko, Ya.V., Engineer, 28-58-3-12/39

TITLE: Initial Experiment in Setting up a Norm , Pervyi copy  
razrabotka normall)

PERIODICAL: Standartizatsiya, 1958, Nr 3, pp 41-45 (USSR)

ABSTRACT: Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut  
khimicheskogo mashinostroyeniya (The All-Union Scientific Re-  
search and Design Institute of Chemical Machine Building), which  
is one of the base organizations for standardization and norma-  
lization, has worked out the norm titled "Springs, Cylindrical  
Helical, Compression and Tension, General Use". The norm  
was approved and issued in March 1956. The article is a de-  
tailed consideration of this norm and its new principles, as  
well as indications of the faults and inconsistencies of the  
many different old norms standards of different industrial  
organizations which the new norm has eliminated. The new  
diagram characteristic for helical springs is described and  
illustrated (Fig. 2). The rules of determining the coefficient  
of durability and the coefficient of safety are treated. The  
new norm provides that springs be made only of material re-  
ceived with a supplier's certificate. There are 2 figures and

Card 1/2

Initial Experiment in Setting up a Norm  
and 2 Soviet references.

28-58-3-12/39

ASSOCIATION: NIIKhIMMASH

Card 2/2      1. Helical springs--Standards      2. Standardization

SOV/28-59-1-2/29

AUTHORS: Salamatov, I. I., and Shuliko, Ya. V., Engineers

TITLE: The Trend of Normalization Work in Chemical Machine Construction (Napravleniye rabot po normalizatsii v khimicheskome mashinostroyenii)

PERIODICAL: Standartizatsiya 1959, Nr 1, pp 6 - 9 (USSR)

ABSTRACT: NIIKhIMMASH studied the standardization of containers and apparatuses for various chemical functions, and their parts. They were classified according to structural features. Parts and units used were classified into a particular group of standard elements. Percussion caps and the box type caps for fractionating columns were standardized. Tubes for all types of tubular heat-exchangers were normalized in sizes: 25 x 2; 38 x 2 and 57 x 2,5 mm. Seventeen sizes of cylindrical reducers were normalized. The number of gears was more than 5 times reduced. A standard for the air collectors for air compressors was created, specified and submitted for approval. The Standardization of mixers and their drives is now being studied. Nine catalogs on standardized chemical machines and accessories have been issued. The construction of new

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, The Trend of Normalization Work in Chemical Machine Construction

plants for the production of chemical machinery is planned  
in view of the estimated 3.3 - 3.5 time production increase.  
A standardization plan is now being elaborated by

ASSOCIATION: NIKHIMMASH

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S/028/60/000/06/04/028  
B012/B005

AUTHOR: Shuliko, Ya. V.

TITLE: Methods and Standards<sup>14</sup> of Calculating the Strength<sup>26</sup> of Containers and Apparatus

PERIODICAL: Standartizatsiya, 1960, No. 6, pp. 13 - 16

TEXT: A conference on methods and standards of calculating the strength of containers and apparatus was held by the Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya (All-Union Scientific Research Institute of Chemical Machine Construction; abbreviated: NIKhIMMASH) late in 1958. It was decided to work out a unified standard in two steps. A technical instruction containing theoretical, experimental, and empirical material is to be issued in 1961, and in 1963 this material is to be transformed into standards. For this purpose, a commission was established consisting of representatives of the leading scientific research organizations. The results of their work are to be coordinated and generalized at the laboratoriya prochnosti (Laboratory of Strength) of the NIKhIMMASHA. The first part of the

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Methods and Standards of Calculating the  
Strength of Containers and Apparatus

S/028/60/000/06/04/028  
B012/B005

technical instruction (abbreviated: PTM = RTM) was handed to enterprises in March 1960. It contains the calculating methods recommended by the TsKTI (Tsentral'nyy kotloturbinnyy institut im. Polzunova (Central Boiler Turbine Institute imeni Polzunov)) according to the "Standards for Calculating the Strength of Steam Boilers" approved by the Gosgortekhnadzor in 1956. The comparative values for the permissible external pressure of cylindrical shells correspond to the British standards and the US Code. The methods and standards worked out apply to the calculation of elements of cylindrical containers and apparatus made of carbon steels and steel alloys for chemical, petroleum-chemical, petroleum-processing, and similar industrial branches. They are applied to seamless and welded container elements working under pressure. The durability of strength is determined by experiments over 7,000 hours. The author indicates the maximum value of the coefficient  $\varphi$  for the strength of seams which lies between  $\varphi = 1$  and  $\varphi = 0.7$ . Depending on the application of boilers under chemical-technological conditions, a correction coefficient  $\gamma$  is introduced (Table p.14). The wall thickness with given internal pressure is computed by formula (1), the permissible working pressure with given wall thickness by formula (2); the wall

Card 2/3

SHULIKO, Ya.V.

Standardization of equipment for the chemical industry. Standarti-  
zatsiia 25 no.1:26-28 Ja '62. (MIRA 15:1)  
(Chemical industries--Equipment and supplies--Standards)

SHULIKO, Ya.V.

Introducing new methods for the strength calculation of parts  
and units. Standartizatsia 27 no.5:15-17 My '63.  
(MIRA 16:6)

(Pressure vessels--Standards)

SHULIKO, Ya.V.

Reviewing standards for flanges. Standartizatsiia 27  
no.10:16-25 0 '63. (MIRA 16:11)

SHULIKO, Ya.V.

New objectives of the chemical machinery industry. Standartizatsiia  
28 no.5:12-15 My '64. (MIRA 17:12)

SHULIKOVSKIY, S.

Economic efficiency of using 25-ton dump trucks. Avt.transp. 37  
no.3:34 Mr '59. (MIRA 12:4)

1. Nachal'nik avtotransportnogo upravleniya stroitel'stva Irkutskoy  
gidroelektrostantsii.  
(Dump trucks)

KOLLE, V.G., LAPTEV, B.L.; SHIBOKOV, A.P.; SHILIKOVSKIY, V.I.

Aleksandr Petrovich Norden, 1904, on his 60th birthday. Usp.  
mat. nauk 19 no.5:171-179 S-O '64.



SHULIKOVSKIY, V. I.

Shulikovskiy, V. I. An invariant criterion for a Liouville surface. Doklady Akad. Nauk SSSR (N.S.) 94, 29-32 (1954). (Russian)

The search for a quadratic integral of the geodesics of a surface with  $ds^2 = g_{ab} du^a du^b$  has led V. V. Vagner [Trudy Sem. Vektor. Tenzor. Analizu 5, 246-249 (1941); these Rev. 8, 602] to a system of partial differential equations of the third order on which the problem depends. In the present paper the integrability conditions of this problem are written out and conditions given under which there will be four, three, two and one quadratic integral. These conditions involve the rank of a certain system of equations of which the coefficients depend in a rather complicated way on the total curvature of the surface and its first and second derivatives. The relation of this problem to Liouville surfaces has already been pointed out by Darboux [Leçons sur la théorie générale des surfaces, t. III, Gauthier-Villars, Paris, 1894, Ch. 2]. D. J. Struik (Cambridge, Mass.).

*Shulikovskiy, V.I.*

USSR/Mathematics

Card 1/1      Pub. 22 - 9/47

Authors        : Shulikovskiy, V. I.

Title          : Invariant characteristics of metrical properties of a spiral surface

Periodical    : Dok. AN SSSR 99/1, 35-36, Nov 1, 1954

Abstract      : A proof that metrical properties of spiral surfaces have invariant characteristics is given. Two Russian references (1952).

Institution   : Kazan State University im. V. I. Lenin-Ul'yanov

Presented by : Academician P. S. Alexandroff, June 11, 1954

SHULIKOVSKIY, V. I.

✓ Shulikovskii, V. I. On infinitesimal bending of a surface.  
Kazan. Gos. Univ. Uč. Zap. 114, no. 2 (1954), 79-87.  
(Russian)

*math* This is a unified representation by tensor methods of  
classical results on infinitesimal bending of surfaces as  
found in the well known treatises of Bianchi and Darboux  
on differential geometry and in A. P. Norden's "Spaces  
with affine connections" [Gostehizdat, Moscow-Lenin-  
grad, 1950; MR 12, 441]. *H. Busemann.*

SHULIKOVSKIY, V.I.

Affine classification of surfaces with an infinite number of transfer  
networks. Dokl.AN SSSR 105 no.3:430-432 N '55. (MLRA 9:3)

1. Predstavleno akademikom P.S. Aleksandrovym.  
(Surfaces)

SHULIKOVSKIY, V.I. (Kazan')

Transfer surfaces. Uch.zap.Kaz.un. 115 no.10:19-20 '55.  
(MLRA 10:5)

(Geometry, Modern)

SHULIKOVSKIY, V. I.

Shulikovskii, V. I. On a method of normalization of a tensor of a net on a surface. Uč. Zap. Kazan. Univ. 115 (1955), no. 14, 53-59. (Russian)

1-F/W

By the tensor of a net on a two-dimensional surface the author understands a tensor  $a_{ik}$  from the differential equation  $a_{ik}du^i du^k = 0$ , taking into account that this tensor is defined by giving the net and the parametrization  $(u^1, u^2)$  to within a (functional) multiplier. The problem consists in finding a factor  $e^{2\lambda}$  such that the form  $e^{2\lambda}a_{ik}du^i du^k$  will have null (gaussian) curvature; this normalization the author calls euclidean, while the tensor  $e^{2\lambda}a_{ik}$  is called the  $E$ -tensor of the net. Making use of previously known results, to a great extent his own [same Zap. 112 (1952), no. 10], the author reduces the problem in the metric case to a 2nd order partial differential equation. (Reviewer's remark. This was to be foreseen from a comparison with the theory of conformal mapping of a surface into the plane.) Knowing one solution permits us to find final equations of the net by quadratures. The results so obtained are extended to important classes of nets, like: the Čebisev, the Ricci geodesic, the doubly parallel (each of the two families consists of geodesically parallel curves), the equiareal, the asymptotic, the net of lines of curvature.

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Ya. S. Dubnov (RŽMat 1957, no. 821).

11

SOV/44 - 58 - 4 - 3226

Translation from: Referativnyy zhurnal, Matematika, 1958, Nr 4,  
p 126 (USSR)

AUTHOR: Shulikovskiy, V. I.

TITLE: A Tensor Presentation of the Method of a Moving Trihedral  
of a Surface in  $E_3$  (Tenzornoye izlozheniye metoda podvizh-  
nogo trekhgranika poverkhnosti v  $E_3$ )

PERIODICAL: Uch. zap. Kazanskogo gos. ped. un-ta, 1955, 115, Nr  
14, pp 61-68

ABSTRACT: A tensor interpretation is given of the fundamental con-  
cepts and operations of the method of exterior forms for the case  
of a two-dimensional region. Resolving the derivatives of a  
radius-vector of a point of a surface and of position vectors of  
a moving trihedral connected with the surface, in the direction  
of a position vector of this trihedral, and writing the conditions  
of the integrability of the derived equations, the author derives

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an expression for the transversal vector (RZhMat, 1957, 821), the equation of Gauss and Peterson-Codazzi. In the appendix are examined certain known properties of cyclic systems and of surfaces of the centers of curvature, and the solution is given for the Bianchi problem to find the surface in the tangential planes of which it is possible to place  $\infty^2$  rays of the congruence which forms with the congruence of the normals of the surface a completely fibred pair.

A. I. Sirota

Card 2/2



SHULIKOVSKIY, V.I.

SHULIKOVSKIY, V.I.

Determining a two-dimensional motion of a liquid in case of given values for the module, divergence, and rotation of its velocity.  
Uch.zap.Kaz.un. 116 no.1:20-21 '55. (MLBA 10:5)

1.Kafedra obshchey matematiki.  
(Hydrodynamics) (Mathematical physics)

SHULIKOVSKIY, V. I.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress \*(Cont.) Moscow  
Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.  
Fedenko, A. S. (Minsk). On the Theory of Symmetrical Spaces. 174-175

There are 2 references, 1 of which is USSR, and the other French.

Shveykin, P. I. (Moscow). Affine-invariant Development. . 175

Mention is made of Laptev. G. F.

Shirokov A. P. (Kazan'). Projective Interpretation of  
Conformly Euclidean Symmetrical Spaces. 176

Shulikovskiy, V. I. (Kazan'). On a Generalization of  
Killing Equations and Imprimitive  $n$ -Webs. 176

Mention is made of Yegorov, D. F.

Shcherbakov, R. N. (Ulan-Ude). Yegorov's Transformations  
in the Theory of Congruences. 176-177

Card 56/80

PHASE I BOOK EXPLOITATION

SOV/5726

Moscow. Universitet.

Trudy seminara po vektornomu i tenzornomu analizu s ikh prilozheniyami k geometrii, mekhanike i fizike. vyp. 11. (Transactions of the Seminar on Vector and Tensor Analysis With Their Application in Geometry, Mechanics, and Physics. no. 11) [Moscow] 1961. 314 p. 2,500 copies printed.

Sponsoring Agency: Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova.

Ed. (Title page): P. K. Rashevskiy, Professor; Ed.: V. A. Gukovskaya; Tech. Ed.: K. S. Chistyakova.

PURPOSE: This book is intended for theoretical physicists, mathematicians, and engineers.

COVERAGE: The book contains reports presented at the Seminar on Vector and Tensor Analysis (Moscow, 1961), includes an annotated

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Transactions of the Seminar (Cont.)

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bibliography of some reports presented at Seminar meetings over the period 1 July 1954 through 31 December 1957, and reviews the life and works of Yakov Semenovich Dubnov (1887-1957), senior member and cofounder (with V. F. Kagan and others) of the Seminar. Professor Dubnov's contributions to mathematics are reviewed in some detail and include his teaching of analytical and differential geometry with the application of vector analysis and works on problems in the algebra of affinors. Dubnov also wrote Osnovy vektornogo ischisleniya (Principles of Vector Calculus), studied the general theory of nets on surfaces, and worked on studies of different types of nets and invariant characteristics of nets on surfaces, the central projective and affine theory of curves and surfaces, and related subjects. A chronological bibliography of his publications is included. The biographical sketch of Professor Dubnov was written by V. V. Vagner and A. M. Lopshits. No personalities are mentioned. References accompany individual articles.

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